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DYSENTERY OUTBREAK IN KENTUCKY.

By JOHN McMULLEN, Surgeon, United States Public Health Service.

Pursuant to telegraphic orders of August 27, 1917, to investigate an outbreak of suspected dysentery in Breathitt County, I left Lexington on the morning of the 28th, and proceeded to Jackson.

On the morning of August 29 I went to Oakdale, a distance of 9 miles from Jackson. From there I rode on horseback to the home of Mr. M. on War Creek, a distance of about 5 miles, and ascertained from him that there had probably been about 25 to 30 cases of what is described locally as "flux". The history, as obtained from the patients and their neighbors, there being no physicians in attendance on practically any of the cases, is that the patients were attacked suddenly with severe diarrhea, sometimes accompanied with chill and vomiting, and severe tenesmus, succeeded shortly by the passage of blood and mucus described by them as "jelly" and blood. Some fever was present at the onset, but the patients soon became cold and clammy.

At the time of my visit there were only a few cases in existence, as the majority had died, and as stated by the citizens of the community the disease appeared to have lessened. It appears that the entire outbreak in this community was confined to a radius of about 3 miles, near the mouth of War Creek, and on Rock Lick Creek on the north fork of the Kentucky River, and about 12 miles below Jackson. Practically none of these cases were attended by physicians, and I was therefore unable to gain any information from the physicians in regard to the present epidemic. However, I am informed by Dr. Bach, of Jackson, Ky., that a very similar outbreak occurred last summer up the north fork of the Kentucky River from Jackson about 20 miles, at a community called Crockettsville, and on Long Branch which empties into the River at Crockettsville.

I am also informed by Dr. Bach that he has learned on very reliable authority that this Long Branch neighborhood has, within

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the past month or two, had a large number of cases of this same trouble, which is termed "flux" by the local community, and that 18 deaths have already occurred. During the epidemic on Long Branch last summer there were about 20 deaths, a majority of the cases, according to Dr. Bach, proving fatal.

It appears that the first case in the War Creek neighborhood occurred about June 25 of this year in the family of Rev. W. M., a local minister. In conversation with Mr. M., he informed me that his child, about 2 years of age, was taken sick on or about June 25, with all the symptoms of dysentery which he observed in all the subsequent cases.

The family of Mr. M. consists of about 13 members, and five other cases occurred immediately after that of the small child, who died in nine days from the onset of the disease. Mr. M. further informed me that he had seen every case of the disease which had occurred, and in every case the patient was taken sick in the same manner, with precisely the same symptoms, and about every other one died in from a week to 10 days after the onset.

He further informed me that his family had used the water from a spring, situated practically in the creek bed, for drinking purposes and he feels confident that this is the cause of the sickness in his family. All of the other families in which the sickness occurred had bad drinking-water supplies, many of which were springs similar to the one used by Mr. M., and the wells were shallow and polluted from the stream. Since the death of his baby he has prepared a well on the hillside and sufficiently deep to supply good drinking water.

The next group of cases which occurred was among neighbors of Mr. M., and of the same name. They visited the minister during the sickness in his family and several of their children promptly contracted the disease and some of them died. One boy about 11 years of age died the day previous to my visit. Visiting and assisting in caring for the sick are customs in the mountains, and the neighbors visited and assisted at all of the cases.

I visited two of the patients who were sick at the time of my visit to Breathitt County. One was a woman about 40 years of age, who was recovering after an illness of about a week, and the other was an elderly woman about 60 years of age. This patient had considerable prostration, no fever, constant desire to go to stool, at which time only mucus and blood was passed. A specimen of this was collected and forwarded to the Hygienic Laboratory for examination. This patient had been ill about five days. The tongue was red, rather dry, and the prognosis was unfavorable.

In the opinion of a number of people with whom I talked this is not an uncommon infection in the mountains during the months of

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July and August, and it has been usually a fatal disease. The locality affected in the neighborhood of War Creek is a sparsely settled one, with a total of possibly 25 houses, and the majority of these had cases of the disease. A widow and her three sons all contracted the disease and all the boys died.

A tentative diagnosis of bacillary dysentery was made pending receipt of the findings of the specimen submitted to the laboratory. In addition to the polluted drinking water used by practically all of the families there is an entire absence of hygiene, and they all live under the most unsanitary conditions.

In addition to this there are swarms of flies everywhere, particularly on the dining tables at the time of meals. No precaution, with the possible exception of occasionally burying the stools, is taken to prevent the flies having access, the stools being emptied not very far from the house. The flies, therefore, have access to the stools and to the dining tables during meals. It is therefore not a very difficult task to ascertain how the disease is spread.

The local registrar (Mr. T. L. M.) was absent from his home at the time of my visit and I was therefore unable to see him, but the local minister, Mr. M., I believe probably has more definite information than anyone whom I was able to interview, and he states that there were 13 deaths and about 30 cases.

One patient, the son-in-law of Mr. J. M., on War Creek, whom I visited, was sick for a number of weeks, and his case was diagnosed by his physician as typhoid fever. This diagnosis appears to be accepted by the community.

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